

What is claimed is:

1. A cut filler composition comprising tobacco and an oxyhydroxide compound, wherein during combustion of the cut filler composition, said oxyhydroxide compound is capable of decomposing to form at least one product capable of acting as an oxidant for the conversion of carbon monoxide to carbon dioxide and/or as a catalyst for the conversion of carbon monoxide to carbon dioxide.
2. The cut filler composition of claim 1, wherein said oxyhydroxide compound is capable of decomposing to form at least one product capable of acting as both an oxidant for the conversion of carbon monoxide to carbon dioxide and as a catalyst for the conversion of carbon monoxide to carbon dioxide.
3. The cut filler composition of claim 1, wherein the oxyhydroxide compound is selected from the group consisting of FeOOH , AlOOH , TiOOH , and mixtures thereof.
4. The cut filler composition of claim 1, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition is in the form of nanoparticles.
5. The cut filler composition of claim 1, wherein the oxyhydroxide compound is capable of decomposing during combustion of the cut filler composition to form at least one product selected from the group consisting of Fe_2O_3 , Al_2O_3 , TiO_2 , and mixtures thereof.
6. The cut filler composition of claim 1, wherein the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition is present in an amount effective to convert at least 50% of the carbon monoxide to carbon dioxide.

7. The cut filler composition of claim 1, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition has an average particle size less than about 500 nm.

8. The cut filler composition of claim 7, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition has an average particle size less than about 100 nm.

9. The cut filler composition of claim 8, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition has an average particle size less than about 50 nm.

10. The cut filler composition of claim 9, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition has an average particle size less than about 5 nm.

11. A cigarette comprising a tobacco rod, wherein the tobacco rod comprises a cut filler composition comprising tobacco and an oxyhydroxide compound, wherein during smoking of the cigarette, said oxyhydroxide compound is capable of decomposing to form at least one product capable of acting as an oxidant for the conversion of carbon monoxide to carbon dioxide and/or as a catalyst for the conversion of carbon monoxide to carbon dioxide.

12. The cigarette of claim 11, wherein said oxyhydroxide compound is capable of decomposing during smoking of the cigarette to form at least one product capable of acting as both an oxidant for the conversion of carbon monoxide to carbon dioxide and as a catalyst for the conversion of carbon monoxide to carbon dioxide.

13. The cigarette of claim 11, wherein the oxyhydroxide compound is selected from the group consisting of FeOOH, AlOOH, TiOOH, and mixtures thereof.

14. The cigarette of claim 11, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition is in the form of nanoparticles.

15. The cigarette of claim 11, wherein the oxyhydroxide compound is capable of decomposing during smoking of the cigarette to form at least one product selected from the group consisting of Fe_2O_3 , Al_2O_3 , TiO_2 , and mixtures thereof.

16. The cigarette of claim 11, wherein the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette is present in an amount effective to convert at least 50% of the carbon monoxide to carbon dioxide.

17. The cigarette of claim 11, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 500 nm.

18. The cigarette of claim 17, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 100 nm.

19. The cigarette of claim 18, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 50 nm.

20. The cigarette of claim 19, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 5 nm.

21. The cigarette of claim 11, wherein the cigarette comprises from about 5 mg to about 200 mg of the oxyhydroxide compound per cigarette.

22. The cigarette of claim 21, wherein the cigarette comprises from about 40 mg to about 100 mg of the oxyhydroxide compound per cigarette.

23. A method of making a cigarette, comprising

(i) adding an oxyhydroxide compound to a cut filler, wherein the oxyhydroxide compound is capable of decomposing during the smoking of the cigarette to form at least one product capable of acting as an oxidant for the conversion of carbon monoxide to carbon dioxide and/or as a catalyst for the conversion of carbon monoxide to carbon dioxide;

(ii) providing the cut filler comprising the oxyhydroxide compound to a cigarette making machine to form a tobacco rod; and

(iii) placing a paper wrapper around the tobacco rod to form the cigarette.

24. The method of claim 23, wherein said oxyhydroxide compound is capable of decomposing during smoking of the cigarette to form at least one product capable of acting as both an oxidant for the conversion of carbon monoxide to carbon dioxide and as a catalyst for the conversion of carbon monoxide to carbon dioxide.

25. The method of claim 23, wherein the oxyhydroxide compound and/or the product formed from the decomposition of the oxyhydroxide during combustion of the cut filler composition is in the form of nanoparticles.

26. The method of claim 25, wherein the oxyhydroxide compound used in step (i) and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 100 nm.

27. The method of claim 26, wherein the oxyhydroxide compound used in step (i) and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 50 nm.

28. The method of claim 27, wherein the oxyhydroxide compound used in step (i) and/or the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette has an average particle size less than about 5 nm.

29. The method of claim 23, wherein the cigarette produced comprises from about 5 mg to about 200 mg of the oxyhydroxide compound per cigarette.

30. The method of claim 29, wherein the cigarette produced comprises from about 40 mg to about 100 mg of the oxyhydroxide compound per cigarette.

31. The method of claim 23, wherein the oxyhydroxide compound used in step (i) is selected from the group consisting of FeOOH, AlOOH, TiOOH, and mixtures thereof.

32. The method of claim 31, wherein the oxyhydroxide compound used in step (i) is FeOOH.

33. The method of claim 23, wherein the oxyhydroxide compound used in step (i) is capable of decomposing to form at least one product selected from the group consisting of Fe₂O₃, Al₂O₃, TiO₂, and mixtures thereof.

34. The method of claim 33, wherein the product formed from the decomposition of the oxyhydroxide during smoking of the cigarette is present in an amount effective to convert at least 50% of the carbon monoxide to carbon dioxide.

35. A method of smoking the cigarette of claim 11, comprising lighting the cigarette to form smoke and inhaling the smoke, wherein during the smoking of the cigarette, the oxyhydroxide compound is capable of decomposing to form at least one product capable of acting as an oxidant for the conversion of carbon monoxide to carbon dioxide and/or as a catalyst for the conversion of carbon monoxide to carbon dioxide.